invent

network printing

hp jetdirect print servers

installation and configuration guide

model 170x

5990-2875

Installation and Configuration Guide

HP Jetdirect 170X External Print Server

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Table of Contents

1. Introduction

Product Overview 1-1
What's Included 1-2
For Further Help 1-2
Network Printing Basics 1-3
Installation Overview 1-5
Configuration for Network Printing 1-5
Customer Support 1-6
Electronic Services 1-6
HP Customer Care Phone Numbers 1-7

2. Where Do I Begin?

Which CD-ROM Do I Use? 2-2
Do you have everything that you need? 2-3
Other HP Installation Software 2-4
Install Network Printer Wizard (Windows) 2-5
HP Web JetAdmin 2-6
HP IP/IPX Printer Gateway for NDPS 2-8

3. Installing the HP Jetdirect 170X Print Server

LEDs 3-2
Install the 170X Hardware 3-3
Print a 170X Configuration Page 3-4

4. Using the CD-ROM to Install the Software

Microsoft or Novell NetWare Networks 4-2
To Use the HP Install Network Printer Wizard 4-3
To View Documents on the CD-ROM 4-6

5. Using the Embedded Web Server

Supported Web Browsers 5-2
Supported HP Web JetAdmin Version 5-2
Viewing the Embedded Web Server 5-2
Special Features 5-3
Operating Notes 5-4

6. FTP Printing

Requirements 6-1
Print Files 6-2
Using FTP Printing 6-2
FTP Connections 6-2
FTP Login 6-3
Ending the FTP Session 6-4
Commands 6-4
Example of an FTP Session 6-5

7. Troubleshooting

The 170X Configuration Page 7-1
Resetting Configuration to Factory Defaults 7-4
Troubleshooting Steps 7-4
I. Verify the printer works properly 7-4
II. Verify the 170X hardware works properly 7-5
III. Verify that you can print to the printer when it's attached directly to a PC 7-5
Novell NetWare (non-NDPS) Checklists 7-6
File Server Checklist 7-6
Server-to-Printer Connection Checklist 7-6
Workstation Checklist 7-7
Workstation-to-Print Server Checklist 7-7
Microsoft Windows 95, 98, 2000, NT 4.0 Checklist 7-8

8. HP Jetdirect Configuration Page Messages

Overview 8-1

A. Technical Specifications and Regulatory Statements

Specifications A-1
Supported Networks A-1
Hardware A-1
Regulatory Statements A-5

B. Warranty Service

Index

1

Introduction

Product Overview

The HP Jetdirect 170X (J3258B) is an external print server that allows you to connect your printer, plotter, or HP All-In-One peripheral with scanning capability[1] directly to your network. The 170X enhances workgroup productivity by letting you place your printer or plotter at a convenient location on the network while improving network printer performance.

The HP Jetdirect 170X has a single high-speed, bidirectional parallel port (IEEE 1284) for connecting your device. It also has an RJ-45 network port (10Base-T) for connecting the network.

See Appendix A for technical specifications, supported environments, and accessory part numbers.

The HP Jetdirect 170X print server supports the following:

Network Operating System	Protocol(s)
Novell NetWare 3.2, 4.x, 5.x	IPX/SPX
Novell NetWare 4.11, 4.2 with NDPS	IPX/SPX
Novell NetWare 5.x with NDPS	IPX/SPX, TCP/IP
Microsoft Windows 2000 or NT 4.0, peer-to-peer or client-server	TCP/IP, IPX/SPX
Microsoft Windows 95, 98 (peer-to-peer)	TCP/IP, IPX/SPX
Artisoft LANTastic Powersuite 7.0. (Contact the system vendor for software, documentation, and support.)	DLC/LLC

1. Supported HP All-In-One peripherals: HP LaserJet 1100A; HP OfficeJet Pro Series (basic image scanning); and OfficeJet R40 and R60.

What's Included

- HP Jetdirect 170X Print Server
- Power Module (see Appendix A for part numbers)
- CD-ROM containing HP Jetdirect software
- *Installation and Configuration Guide* (this manual)

For Further Help

For information on subjects not included in this manual, see the following manual shipped electronically on the HP Jetdirect CD-ROM:

Documents on the HP Jetdirect CD-ROM	Document Contents
HP Jetdirect Print Server Administrator's Guide (600N/400N/500X/300X)	● TCP/IP Configurations (Chapter 3) ■ Using BOOTP/TFTP ■ Using DHCP ■ Using RARP ■ Using the `arp` and `ping` commands ■ Using Telnet ● Printing on Windows DLC/LLC Networks (Appendix C)

For release notes, see the "Readme" file in the root directory of the HP Jetdirect CD-ROM.

For web-based or direct phone support, refer to the HP Customer Care information starting on page 1-6.

Network Printing Basics

Networks consist of computers connected together to share information and resources, such as printers. There are two ways to share printers on a network: Client-Server and Peer-to-Peer.

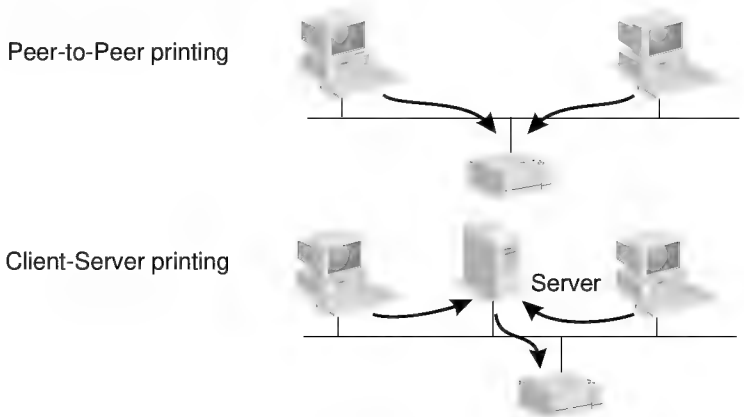


Figure 1.1 Network Printing Configurations

On a "client-server" network, client computers send print jobs to *dedicated server* computers that control the use of each printer. This printing is typically used in medium to large networks where dedicated servers are used to manage printing needs of many users. Client-server networks use network operating systems (NOS's) such as Novell NetWare, Microsoft Windows NT or 2000 Server.

On a "peer-to-peer" network, dedicated servers are not used. Instead, each computer is configured to send print jobs to the printer directly. This is more suitable for smaller networks. On peer-to-peer networks, users configure their Microsoft Windows 95, NT, or 2000 systems to print directly to the

printer. Note that peer-to-peer printing can be configured on a client-server network. For example, a small workgroup might use peer-to-peer printing even though it is connected to an enterprise-wide client-server network.

Regardless of the network type (client-server or peer-to-peer), your computers and printers must use a common language, or "network protocol" to communicate with each other. The most common protocols are **IPX** (Internet Packet Exchange), made popular by Novell NetWare networks, and **TCP/IP** (Transmission Control Protocol/Internet Protocol), made popular by the Internet. The HP Jetdirect 170X supports these network protocols, including DLC/LLC, and allows your printer to communicate on the network.

Installation Overview

To install the HP Jetdirect print server hardware, simply connect the 170X to the network, then connect your printer, plotter, or HP All-In-One peripheral to the 170X using the parallel port connector (See chapters 2 and 3.)

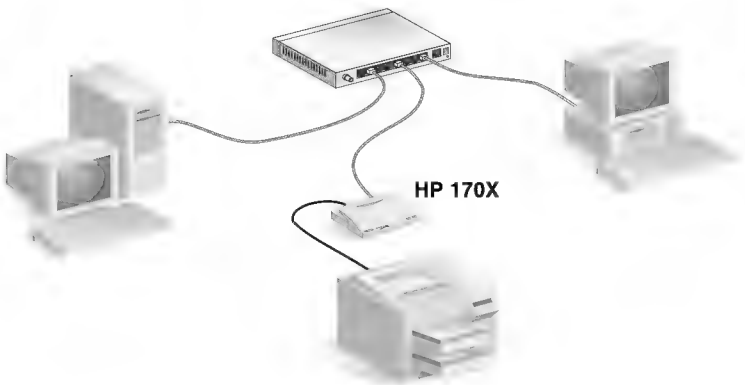


Figure 1.2 Use the HP Jetdirect 170X print server to connect a printer, plotter, or HP All-in-One peripheral to your network.

Configuration for Network Printing

- If you are on a Novell NetWare (client-server) network, you can configure the NetWare server and the print server for network printing using HP Jetdirect software. Then configure the network clients for printing.
- If you are setting up client-server printing on a Microsoft Windows 95, 98, NT, or 2000 network, you configure your Windows 95, 98, NT, or 2000 server for printing using HP Jetdirect software, then share the printer with client computers.

- If you are setting up peer-to-peer printing on a Microsoft Windows 95, 98, NT, or 2000 network, you simply configure each Windows 95, 98, NT, or 2000 client to print directly to the printer using HP Jetdirect software (see chapter 4).

Customer Support

Electronic Services

Hewlett-Packard provides electronic services that can be used to obtain software updates and related product information.

For the latest information about HP Jetdirect print servers and software, visit HP's Customer Care Online.

Current information for HP printers and Jetdirect print servers are available through the following electronic sources:

Customer Care Electronic Support Services	
World Wide Web	Access HP's Customer Care Center online at: `http://www.hp.com/support/net_printing`
Customer Care User Forum	To participate in a user forum discussing ideas and suggestions for using the HP Jetdirect print server, go to: `http://www.hp.com/go/forums` Select "Network Printing Support Forum." Then select the appropriate product.
HP Distribution Center	Order drivers and upgrades for HP printers by calling the HP Distribution Center at (805) 257-5565 (USA only).
FTP Site	Download printer drivers and upgrades from HP's anonymous FTP site at: `ftp.hp.com/pub/networking/software`

HP Customer Care Phone Numbers

If you need assistance, call one of the following numbers:

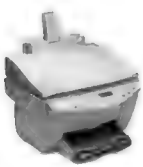
Australia	+ 61 3 8877 8000	Malaysia	+ 60 (0)3 295 2566
		Mexico City	52 58 9922
Austria	+ 43 (0)7114 201080	Mexico	01 800 472 6684
Belgium (Dutch)	+ 32 (0)2 626 8806	Netherlands	+ 31 (0)20 606 8751
Belgium (French)	+ 32 (0)2 626 8807	New Zealand	+ 64 (0)9 356 6640
Canada	905 206 4663	Norway	+ 47 22 11 6299
China	+ 86 (0)10 6564 5959	Penang	1 300 88 00 28
Czech Republic	+ 42 (0)2 6130 7310	Philippines	+ 63 (0)2 867 3551
Denmark	+ 45 39 29 4099	Poland	+ 48 22 519 06 00
Finland	+ 358 (0)203 47 288	Portugal	+ 351 21 3176333
France	+ 33 (0)1 43 62 34 34		
Germany	+ 49 (0)180 52 58 143	Singapore	+ 65 (0)272 5300
Hong Kong SAR	800 96 7729	Spain	+ 34 902 321 123
Hungary	+ 36 (0)1 382 1111	Sweden	+ 46 (0)8 619 2170
India	+ 91 (0)11 682 6035	Switzerland	+ 41 (0)848 80 11 11
Indonesia	+ 62 (0)21 350 3408	Taiwan	+ 886 (0)2 2717 0055
Ireland	+ 353 (0)1 662 5525	Thailand	+ 66 (0)2 661 4000
Israel	+ 972 (0)9 9524848	Turkey	+ 90 212 221 69 69
Italy	+ 39 02 264 10350	United Kingdom	+ 44 (0)207 512 52 02
Japan	+ 81 (0)3 3335 8333	USA	208 323 2551
Korea	+ 82 (0)2 3270 0700	Vietnam	+ 84 (0)8 823 4530
Latest numbers: `http://www.hp.com/support/support_assistance` For all other countries/regions, contact your reseller.			

For Warranty information, see Appendix B.

Where Do I Begin?

Using the HP Jetdirect 170X External Print Server to add your printer to a network is getting easier all the time! Just follow these steps.

❶ Set up your printer.



For example, you may need to unpack the printer, install and load paper trays, and install ink or toner cartridges.

Assemble your printer (using the instructions supplied with your printer).

Do *not* attach the printer to your computer. (Or detach the printer if it is already set up.)

Switch on the printer. Print a test page if this is included in the instructions.

Do *not* perform any printer software installation yet; proceed with step 2.

❷ Connect your printer to the network.

HP Jetdirect 170X Print Server

Install the HP Jetdirect 170X and connect the cables. The installation instructions are detailed in chapter 3.

❸ Add (or install) the printer on your system.

Printer's CD-ROM
(supplied with printer)

HP Jetdirect CD-ROM
(supplied with print server)

If your printer is listed on page 1-2, use the ***printer's CD-ROM***.
Otherwise, use the ***HP Jetdirect CD-ROM***. For Windows systems, the printer's software driver may be required if it is not already installed. Instructions are detailed in chapter 4.

When you have completed these steps, your system should be able to print to the network printer. Refer to chapter 4 for additional systems.

Which CD-ROM Do I Use?

- For *newer* HP printers, including multifunction peripherals (MFPs) and All-in-One devices, **you should use only the CD-ROM supplied with the printer**. This "printer's CD-ROM" already includes network installation software. In table 2.1 is a list of recent HP printers that integrate network installation software on their CD-ROM. Or see the latest list at:
  `http://www.hp.com/support/network-printer-CD`

Table 2.1 For network installation, use the CD-ROM supplied with these peripherals.

Peripheral Type	Models
HP LaserJet printers and MFPs	1200, 1220, 2200 8150 Series or newer
HP Color LaserJet printers and MFPs	4500, 4550 Series or newer 8550 Series or newer
	3150/3200 Series or newer
HP Business Inkjet printers	2200/2250 Series or newer
HP DesignJet printers	500/800 Series and 5000 Series or newer
OfficeJet printers and All-in-One peripherals	OfficeJet G-Series OfficeJet K-Series

- If your printer is not identified above, or you cannot locate your printer's CD-ROM, **then use the HP Jetdirect CD-ROM** supplied with the HP Jetdirect 170X Print Server. See chapter 4 for details on using the CD-ROM.

  If you use the HP Jetdirect CD-ROM for MFP or All-in-One devices, printing may be the only function available over the network.

Do you have everything that you need?

✓ **A working network with an available network connection**

We assume that you have a working network and an available network connection for your printer. A working network consists of multiple computers that can share files and other resources with each other over the network cables.

✓ **For Windows systems, the printer's software driver**

When using the printer's CD-ROM for installation, the driver will be automatically loaded from the CD-ROM during the installation.

When using the HP Jetdirect CD-ROM for installation:

- You may have the printer driver already installed if you have previously installed the printer on this system.
- You can copy just the driver file from the printer's CD-ROM onto your system (without performing the installation) before you run the installation software on the HP Jetdirect CD-ROM. See the paragraph following this list for more information about the driver file.
- If you have Internet access, you may be able to automatically download the printer driver during the installation. For more information, see chapter 4.)
- Or you can download the printer driver from HP Customer Care Online at:
  `http://www.hp.com/go/support`

The applicable drivers are commonly referred to as the "Add Printer" printer drivers, or the "Corporate User" printer drivers. The HP Jetdirect installation software requires a printer driver file with the appropriate extension (*.inf) to complete the installation.

Other HP Installation Software

For a summary of HP solutions to setup network printing, see table 2.2 below.

Table 2.2 HP Software Solutions (1 of 2)

Install Network Printer Wizard (Windows)

- Supported Networks (TCP/IP, IPX/SPX):
  - Windows 95, 98, ME
  - Windows NT 4.0, 2000
  - NetWare 3.x, 4.x, 5.x
- A simple printer installation tool to Install a single network printer on a peer-to-peer or client-server network
- On newer HP printers, this wizard is typically integrated with printer system software
- Runs from CD-ROM
- Installable version that runs from system disk may be downloaded from HP's Customer Care Online web site.

HP Web JetAdmin (Internet access required)

- Supported Networks (TCP/IP, IPX/SPX):
  - Windows NT 4.0, 2000
  - NetWare (supports NetWare queue creation and peripheral management from HP Web JetAdmin hosted on Windows NT 4.0, 2000)
- Browser-based management
- HP's preferred solution for ongoing management and installation of multiple printers-anywhere on your intranet
- Remote installation, configuration, and management of HP Jetdirect-connected print servers, non-HP printers that support the standard MIBs, and printers with embedded web servers
- Alerts and consumables management
- Remote firmware upgrades for HP Jetdirect print servers
- Asset tracking and utilization analysis

Table 2.2 HP Software Solutions (2 of 2)

HP IP/IPX Printer Gateway

- Supported Networks (TCP/IP, IPX/SPX):
  - NetWare 4.11, 4.2, 5.x
- Simplified installation, printing, and bidirectional management of HP Jetdirect-connected printers under Novell Distributed Print Services (NDPS)
- Allows automatic discovery and installation of HP Jetdirect-connected printers into NDPS via IPX
- Frees up user licenses
- Allows disabling of SAPs to reduce network traffic
- For IPX printing, requires HP Jetdirect firmware version X.03.06 or later

The following sections provide more explanation for the solutions listed in table 2.2. For more information on these and other HP solutions, visit HP Customer Care Online at:
`http://www.hp.com/support/net_printing`

Install Network Printer Wizard (Windows)

This is the standard installation tool most easily accessible on the HP Jetdirect CD-ROM. See chapter 4 for the detailed instructions.

HP Web JetAdmin

HP Web JetAdmin allows you to use a Web browser to install, view, manage, and diagnose devices connected to an HP Jetdirect print server or any standard printer MIB devices.

For information about a procedure or window in the HP Web JetAdmin software, see the online help.

System Requirements

HP Web JetAdmin software runs on Microsoft Windows 2000 and NT 4.0, HP-UX, Solaris, and Red Hat Linux systems. For information on supported operating systems and browser versions, access HP Customer Care Online at `http://www.hp.com/go/webjetadmin/`.

Note When installed on a supported host server, HP Web JetAdmin can be accessed from any client through a supported web browser by browsing to the HP Web JetAdmin host. This allows printer installation and management on Novell NetWare and other networks.

Installing HP Web JetAdmin Software

Before installing the HP Web JetAdmin software, you must have domain administrator or root privileges:

1. Download the installation files from HP Customer Care Online at `http://www.hp.com/go/webjetadmin/`.
2. Follow the instructions on the screen to install the HP Web JetAdmin software.

Note Installation instructions are also contained in the HP Web JetAdmin install file. Installation instructions are also contained in the HP Web JetAdmin `readme` file and in the online help.

Verifying Installation and Providing Access

- Verify that the HP Web JetAdmin software is correctly installed by navigating to it with your browser as shown in the following example:

  `http://server.domain:port/\`

  where `server.domain` is the host name of your web server and `port` is the port number assigned during installation.

- Provide users access to HP Web JetAdmin software by adding a link to your web server's home page that is addressed to HP Web JetAdmin's URL. For example:

  `http://server.domain:port/`

Configuring and Modifying a Device

Using your browser, navigate to HP Web JetAdmin's URL. For example: `http://server.domain:port/`

Follow the instructions on the appropriate home page to configure or modify your printer. These instructions show you how to configure the printer and set up a printer for printing.

Note You can also substitute the `server.domain` with the TCP/IP address.

Removing HP Web JetAdmin Software

To remove HP Web JetAdmin software from your web server, use the uninstall program provided with the software package.

HP IP/IPX Printer Gateway for NDPS

NDPS (Novell Distributed Print Services) is a printing architecture developed by Novell, in partnership with Hewlett-Packard. NDPS simplifies and streamlines the administration of network printing. It eliminates the need to set up and link print queues, printer objects, and print servers. NDPS is managed through a NetWare Administrator snap-in which allows the administrator to manage networked printers within the NetWare 4.11 and 4.22, intraNetWare, and NetWare 5 environments from a single location.

The HP IP/IPX Printer Gateway is an NLM developed by HP to provide functionality and compatibility with Novell's NDPS. It seamlessly integrates HP Jetdirect-connected printers into the NDPS environment. Using the HP Gateway, an administrator can view statistics, configure gateway settings, and configure printing for HP Jetdirect-connected printers.

Features

Features and benefits provided by the HP Gateway and NDPS are:

- Smart detection of printers in the NetWare 4.11 and 4.22, intraNetWare, and NetWare 5 environments
- Automatic installation of printers using IPX/SPX
- Tight integration with Novell's NDS and NWAdmin
- Status updates from printers
- Simplified Automatic Driver Download
- Reduced SAP Traffic
- Reduces the number of required NetWare User Licenses
- Native TCP/IP printing with NetWare 5

Supported Clients

Clients supported by the HP IP/IPX Printer Gateway:

- Novell Client 3.2 (or later) for Windows 95/98
- Novell Client 4.7 (or later) for Windows NT and 2000

The HP IP/IPX Printer Gateway ships in box with Novell NetWare 5.x and supports Novell's second release of NDPS. It also supports NetWare 4.11 and 4.22 and intraNetWare, both with NDPS already installed.

Note

For more information (including access to the HP IP/IPX Printer Gateway software and the User Guide), access HP Customer Care Online:
`http://www.hp.com/support/net_printing`

Installing the HP Jetdirect 170X Print Server

Making a printer available on the network involves the following tasks, as outlined on page 3-1:

1. Set up the printer. Assemble and switch it on, but do not attach it.
2. Connect your printer to the network, by installing the print server. This task is described in this chapter 3, including the following subtasks:
   a. Connect the 170X to the network with a network cable (page 3-3).
   b. Connect the 170X to a printer.
   c. Print a 170X Configuration Page (page 3-4).
3. Add the printer on your system by running the installation software. This task is described in chapter 4.

LEDs

On the top of the 170X are Status and LAN Activity LEDs

If the Status LED is...	And the Activity LED is...	Then the print server is...
Off	Off	Not receiving power.
On	Off	On; no LAN activity detected.
On	Blinking	On; LAN activity detected.
Off	On (Solid)	Encountering a fault during self-test or operation.
Blinking	Off	Encountering one of the following conditions: ● running a self-test. ● not configured. ● not able to attach to the network.
On	On	On; heavy LAN activity detected.

Install the 170X Hardware

Follow the steps below to install the 170X. For technical specifications or part numbers for power modules or parallel cables, see Appendix A.

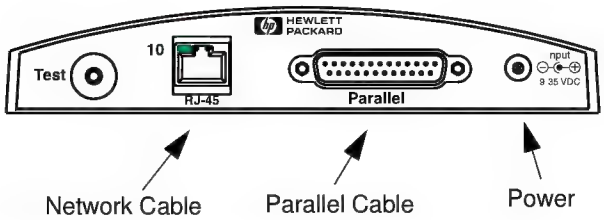


Figure 3-1 Connecting the 170X to the LAN and Printer

1. Connect the 170X to the network with a 10Base-T network cable.
2. Connect the 170X to the printer with a IEEE 1284 parallel cable (see Appendix A for cable part numbers).
3. Plug the DC power cord from the power module into the power port.

Caution Do not use the power module shipped with the 170X with other Jetdirect products!

4. Plug the 170X power module into a wall outlet.
5. The 170X should now be on. Verify that the Status light on the 170X is blinking. If the internal self-test failed, the light will be off. For troubleshooting information, see chapter 7.

Print a 170X Configuration Page

After you have installed the 170X, you are ready to verify the installation.

1. Press the Test button on the back of the 170X to generate a configuration page (see Figure 3-2).

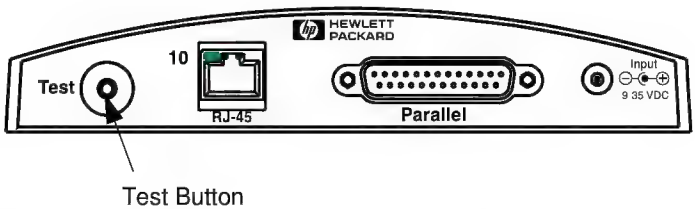


Figure 3-2 Test Button on the back of the 170X

2. The configuration page should print. If it does not, see chapter 7 for troubleshooting information.

Now you are ready to install the HP Jetdirect software (see chapter 4).

Using the CD-ROM to Install the Software

The third task in networking your printer, as described in chapter 2, is to add the printer to the systems by running the software on the CD-ROM. See page 2-2 to decide which CD-ROM to use—the one supplied with the printer or the HP Jetdirect CD-ROM supplied with the HP 175X print server.

The HP Jetdirect CD-ROM, shipped with your print server, provides the fastest and easiest way to install your print server. For additional options, see "Other HP Installation Software" on page 2-4. This chapter describes use of the HP Jetdirect CD-ROM. It contains software, documentation, registration, and licensing information for your HP Jetdirect print server.

Using this CD-ROM on Windows-based systems, you can do the following:

- Quickly set up your printer for printing.
- View documentation and networking help for your print server.
- Register your print server via the Internet.
- Install other HP software for network printer installation and management.

Note On the HP Jetdirect CD-ROM, there may be software that is not supported with the HP Jetdirect 170X. Please see page 1-1 for supported operating systems for the HP Jetdirect 170X.

Microsoft or Novell NetWare Networks

The HP Jetdirect CD-ROM installation utility supports Windows 95, 98, Me, NT 4.0, and 2000 systems only. To run the utility, proceed as follows:

1. Insert the CD-ROM into your CD-ROM drive.
2. Wait for the installation utility to start automatically. If necessary, run SETUP.EXE from the root directory of the HP Jetdirect CD-ROM.

Select the option you desire and follow the instructions on the screen.

To Use the HP Install Network Printer Wizard

To quickly set up your print server and system for network printing, use the Install Network Printer wizard.

Note

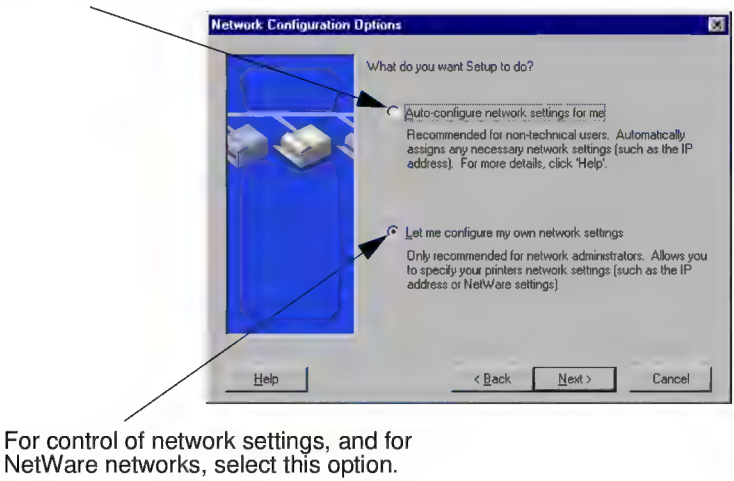
The Install Network Printer wizard can be used in most Windows environments. Note the following exceptions:

- Windows 3.1x and NT 3.51 environments are not supported.
- For newer HP printers (see page 2-2), including MFPs and All-in-One devices, we recommend that you use the installation utilities and instructions that came with your printer. This will ensure that all printer and device features are accessible.

1. From the CD-ROM installation utility's main screen, select **Install** and wait for the Install Network Printer wizard to run.
2. On the Welcome screen, click **Next**.
3. On the Network Configuration Options screen, select a Setup option:
   - Select "**Auto-configure network settings for me**" if you would like the system to automatically assign network configuration parameters, such as an IP address, for you. This option may be preferred by non-technical users.

     Then click **Next**.

     Note: If you select this option, the software may automatically attempt to retrieve and download the printer's software driver from the HP web site (Internet access required).


For non-technical users, select this option.
Network Configuration Options
What do you want Setup to do?
Auto-configure network settings for me
Recommended for non-technical users. Automatically assigns any necessary network settings (such as the IP address). For more details, click 'Help'.
Let me configure my own network settings
Only recommended for network administrators. Allows you to specify your printers network settings (such as the IP address or NetWare settings).
Help
< Back
Next >
Cancel
For control of network settings, and for NetWare networks, select this option.

- Select "**Let me configure my own network settings**" if you need to uniquely specify network parameters for the printer, or you are on a Novell NetWare network. Network administrators will prefer this option.

  Then click **Next**.

  Note: If you select this option, the wizard will require your printer's driver with the appropriate extension (*.inf) to complete the installation. If it is not already installed, you will need to provide it when prompted (for example, from your printer's CD-ROM or downloaded from the Internet). The applicable drivers are commonly referred to as the "Add Printer" printer drivers, or the "Corporate User" printer drivers.

4. Follow the remaining instructions displayed. Click **Help** on each screen for additional instructions.

5. When prompted, print a test page to verify printer setup.

   If the test page successfully prints, then you have completed printer setup on this computer system. (If this system was a server, see "Client-Server Networks" below.)

   If the test page fails to print, perform the troubleshooting tasks displayed by the wizard. Click **Help** for more information. In addition, you can select Networking Help from the CD-ROM installation utility's main screen.

   For detailed troubleshooting information, read the "Troubleshooting" chapter 7.

Client-Server Networks

After you have set up the printer on the server, you will need to set up your network clients to access the printer through the server. The procedures depend on the available utilities for your particular clients and network operating system.

For example, if the printer was installed and shared on a Microsoft server, each Windows client can use Add Printer or Network Neighborhood utilities to access the printer.

For more information, refer to the documentation and help supplied with your network operating system.

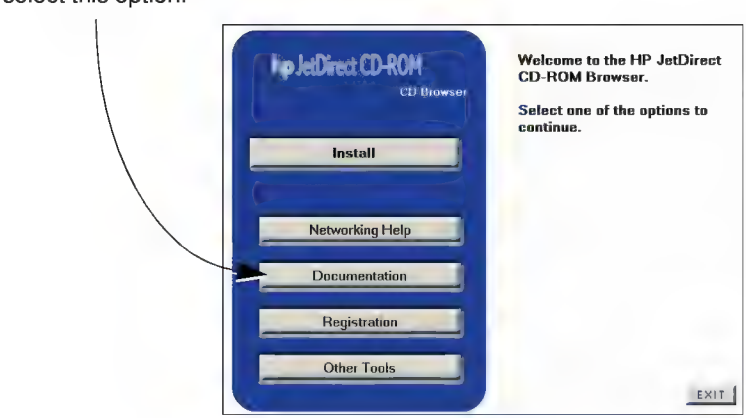
Peer-to-Peer Windows Networks

After you have set up the printer on the first system, repeat the entire procedure on pages 4-3 through 4-6 on each additional system you want to print directly to the network printer.

To View Documents on the CD-ROM

Several HP Jetdirect print server documents, including the *HP Jetdirect Print Server Administrator's Guide*, are provided on the CD-ROM both in Adobe Acrobat Reader format (*.pdf files) and web browser format (*.htm). For supported Windows systems, these documents can be accessed through the CD-ROM utility.

1. Insert the CD-ROM into your CD-ROM drive.
2. Wait for the installation utility to start automatically. If necessary, run SETUP.EXE from the root directory of the HP Jetdirect CD-ROM.
3. Select **View Documentation**. Then select your HP Jetdirect product and browse to the desired documents. The Acrobat Reader will run and will display the HP Jetdirect Documentation home page



4. Click on the document that you want to view.

For Adobe Acrobat format (*.pdf) documents, Adobe Acrobat Reader 4.0 or greater is required. It is available free from Adobe's web site at:

```
http://www.adobe.com/products/acrobat/
readstep.html
```

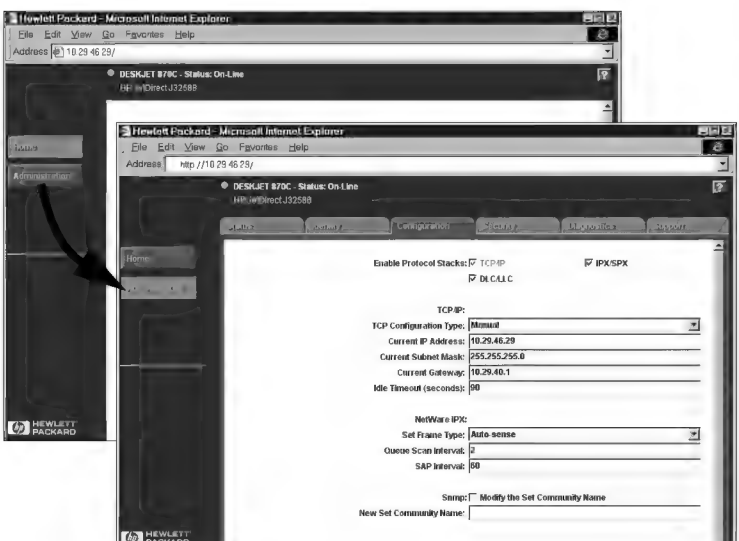
Note

For other supported operating systems, you can access the documentation files directly from the \MANUALS directory on the CD-ROM. For Adobe Acrobat format (*.pdf) documents, the Adobe Acrobat Reader for your system must be installed and available on your system.

If you have difficulty viewing *.pdf documents, upgrade to the latest released version of Acrobat Reader available from Adobe Systems Incorporated.

Using the Embedded Web Server

Each HP Jetdirect 170X print server contains an embedded web server that can be accessed through a supported web browser on an intranet. The embedded web server provides access to configuration and management pages for the HP Jetdirect print server and the attached peripheral device.



Supported Web Browsers

- Windows platforms:
  - Netscape Navigator 4.00, 4.01, 4.02, 4.03, 4.05, 4.06, 4.08
  - Netscape Communicator 4.5, 4.51, 4.6
  - Microsoft Internet Explorer 4.0 with update SP1, 4.01, 5.0
- HP-UX:
  - Netscape Navigator 4.08
  - Netscape Communicator 4.5, 4.51, 4.6
  - Microsoft Internet Explorer 4.0
- Solaris:
  - Netscape Navigator 4.06, 4.08
  - Netscape Communicator 4.51, 4.6
  - Microsoft Internet Explorer 4.0

Supported HP Web JetAdmin Version

HP Web JetAdmin is a printer installation and management application for intranets and is available from HP Customer Care Online at `http://www.hp.com/support/net_printing`.

HP Web JetAdmin version 6.0 or later is recommended for operation with the HP Jetdirect embedded web server.

Viewing the Embedded Web Server

Before you can use the embedded web server, the HP Jetdirect print server must be configured with an IP address.

There are many ways to configure an IP address on the print server. You can *automatically* configure IP parameters over the network using BootP (Bootstrap Protocol) or DHCP (Dynamic Host Configuration Protocol) each time the printer is turned on. Or, you can *manually* configure IP parameters using the printer's control panel (for selected printers), Telnet, HP Web JetAdmin, or other management software.

If the HP Jetdirect print server does not receive its IP configuration within two minutes, a default IP address is automatically assigned: 192.0.0.192. This address is not a valid IP address for your network but can be used to initially access the print server. However, to use the default IP address, you must temporarily set up your system with the same IP *network number* or establish a route to it.

After an IP address is established on the print server, perform the following steps:

1. Run a supported version of your web browser.

Enter the IP address of the print server as the URL (the one displayed in the following screenshot is an example only).

The HP Jetdirect main web page will be displayed. If you have difficulty viewing the page, refer to "Operating Notes".

Click the "?" icon on the web page for more information.

Special Features

- If your printer has been discovered through HP Web JetAdmin 5.0 (or later), the embedded web server on the Jetdirect print server will provide a link to HP Web JetAdmin for management of this and other Jetdirect devices on the network.
- A link to HP's Jetdirect web page is provided. Simply click on the HP logo.

- For some multifunction peripherals (MFPs) and All-in-One devices, scanning is available as a Scan button on the first screen. Pressing this button allows you to scan, preview, crop, and in some cases, e-mail images over the Internet. For more information, access this feature and select Help.

Operating Notes

Changes to the IP address and other parameters will close the connection to the embedded web server. To re-establish a connection, use the new IP address.

FTP Printing

FTP (File Transfer Protocol) is a basic TCP/IP connectivity utility to transfer data between systems. FTP printing is a way to use FTP to send print files from a client system to an HP Jetdirect-connected printer. In an FTP printing session, the client connects and sends a print file to the HP Jetdirect FTP server which in turn passes the print file to the printer.

The HP Jetdirect FTP server can be enabled or disabled through a configuration utility, such as Telnet.

Requirements

FTP printing requires the following:

- HP Jetdirect print servers with firmware version x.08.xx or later.
- TCP/IP client systems with FTP that complies with RFC 959.

Note For the most recent list of tested systems, visit the HP Customer Care Online at:

`www.hp.com/support/net_printing.`

Print Files

The HP Jetdirect FTP server transfers print files to the printer but does not interpret them. For proper printing, print files must be in a language recognized by the printer (such as PostScript, PCL, or unformatted text). For formatted print jobs, you must first print to a file from your application using the driver for the selected printer, then transfer the print file to the printer through an FTP session. For formatted print files, use binary (image) type transfers.

Using FTP Printing

FTP Connections

Similar to standard FTP file transfers, FTP printing uses two TCP connections: a control connection and a data connection.

Control Connection

Using standard FTP, a control connection is opened by the client to the FTP server on the HP Jetdirect print server. FTP control connections are used to exchange commands between the client and the FTP server. The HP Jetdirect print server supports up to three control connections (or FTP sessions) simultaneously. If the number of allowed connections is exceeded, a message indicating that service is not available will be displayed.

FTP control connections use TCP port 21. Once an FTP session is opened, it remains active until either the client closes the connection or the connection is idle for 900 seconds (15 minutes).

Data Connection

A second connection, a data connection, is created each time a file is transferred between the client and the FTP server. The client controls the creation of a data connection by issuing the commands that require a data connection (such as FTP `ls`, `dir` or `put` commands).

Although the `ls` and `dir` commands are always accepted, the HP Jetdirect FTP server supports only one data connection for printing at a time.

The transmission mode for an FTP data connection with the HP Jetdirect print server is always in stream mode, which marks the end-of-file by closing the data connection.

Once a data connection is established, the file transfer type (ASCII or binary) can be specified. Although some clients may attempt to autonegotiate a transfer type, the default is ASCII. To specify the transfer type, enter the `bin` or `ascii` command at the FTP prompt.

FTP Login

To start an FTP session, enter the following command from a MS-DOS or UNIX command prompt:

```
ftp <IP address>
```

where `<IP address>` is the valid IP address or node name configured for the HP Jetdirect print server.

If the connection is successful, the HP Jetdirect model and firmware version will be displayed.

After a successful connection, the user is prompted for a login name and password. The default is the client's login name. The Jetdirect FTP server will allow any user name. Passwords are ignored.

If login is successful, a message "230" will be displayed on the client system. In addition, the available HP Jetdirect ports for printing will be displayed. HP Jetdirect external print servers with multiple ports will display all available ports, with Port1 the default port. To change ports, use the FTP `cd` (change directory) command. For an example of a successful login, see "Example of an FTP Session."

Ending the FTP Session

To end an FTP session, type `quit` or `bye`.

Commands

The following table summarizes commands available to the user during an FTP printing session.

Command	Description
`user <username>`	`<username>` specifies a user. Any user will be accepted and can print to the selected port.
`cd <port#>`	`<port#>` selects a port number for printing. For HP Jetdirect single-port print servers, only port1 is available. For multiport print servers, specify port1 (default), port2, or port3.
`cd/`	`/` specifies the root directory of the HP Jetdirect FTP server.
`quit`	`quit` or `bye` terminates the FTP session with the HP Jetdirect print server.
`bye`	
`dir`	`dir` or `ls` displays the contents of the current directory. If this command is typed in the root directory, a list of available ports for printing is displayed. For multiport print servers, the available ports for printing are PORT1 (default), PORT2, and PORT3.
`ls`	

Command	Description
`pwd`	Displays the current directory or the current Jetdirect printing port.
`put <filename>`	`<filename>` specifies the file to send to the selected HP Jetdirect print server port. For multiport print servers, a different port can be specified in the command: `put <filename> <port#>`
`bin`	Configures an FTP binary (image) file transfer.
`ascii`	Configures an FTP ASCII file transfer. HP Jetdirect print servers support only non-print format control for character transfers (standard values for spacing and margins are used).
Ctrl-C	Press the **Ctrl** and **C** keyboard keys simultaneously to abort the FTP service command and any transfer of data. The data connection is closed.
`rhelp`	Displays the FTP commands supported.

Example of an FTP Session

This is an example of a typical FTP printing session:

```
System> ftp 150.10.2.101
Connected to 150.10.2.101.
220 JD FTP Server Ready
Name (150.10.2.101:root): Kelli
331 Username OK, send identity (email name) as password.
Password:

230- Hewlett-Packard J3265A FTP Server Version 1.0
```

```
Directory:     Description:
---------------------------
PORT1 (default) Print to port 1 (HP LaserJet 4000)
PORT2           Print to port 2 (HP Color LaserJet 4500)
PORT3           Print to port 3 (unknown device)

To print a file use the command: put <filename> [portx]
or 'cd' to desired port and use: put <filename>

Ready to print to PORT1

230 User logged in.
Remote system type is UNIX.
Using binary mode to transfer files.
ftp> pwd
257  "/" is current directory. (default port is PORT1:
HP LaserJet 4000)
ftp> cd port1
250 CWD command successful
ftp>pwd
257  "/PORT1" is current directory.  (HP LaserJet 4000)
ftp> bin
200 Type set to I
ftp> put test
200 PORT command successful
150 Opening data connection...
226 Transfer complete.
18 bytes sent in 0.00 seconds (37.40 Kbytes/s)
ftp> quit
221 Goodbye
System>
script done on Mon Apr 12 16:50:24 1999
```

Troubleshooting

This chapter describes how to diagnose and correct problems associated with the HP Jetdirect 170X print server. To troubleshoot the 170X, you may need the following items:

- For Internet users, access HP's website for troubleshooting Jetdirect print servers: `www.hp.com/support/net_printing`. Select your product type and number and, when displayed, select `Support Documents`. Then select `Troubleshooting`.
- Your printer's user guide
- A 170X configuration page
- Online help files provided with HP's Web JetAdmin or JetAdmin software.
- The diagnostics tools and utilities provided with your network software (such as Novell's PCONSOLE or NWADMIN utilities).

The 170X Configuration Page

The 170X configuration page is an important troubleshooting tool. The information on this page reveals the status of your network and the 170X. The ability to print a configuration page is an indication that the hardware is operating correctly. To generate a configuration page, press the Test button on the 170X.

The HP 170X configuration page (illustrated on page 7-3) is divided into six sections:

Section	Description	Troubleshooting Information
1	General network information	Firmware revision number, type of network (Ethernet), LAN hardware address, port selection type, and manufacturing identification number.
2	Print server status info	Error conditions or I/O CARD READY.
3	Network statistics	Packets received, framing errors, transmit collisions, etc.
4	Novell NetWare status info	Queue server or remote printer mode, node name, and frame type.
5	DLC/LLC status	Status information for the DLC/LLC protocol.
6	TCP/IP status	Status information for the TCP/IP protocol.

Figure 7-1 170X Configuration Page Sections

```
      Hewlett-Packard Jetdirect 170X
         (PCL Configuration Page)

1     HP Jetdirect                 J3258B
      FIRMWARE REVISION:          F.08.05
      LAN HW ADDRESS:       0060B01BE736
      PARALLEL PORT 1:           ECP2/MLC
      MFG ID:              38303830900703
      DATE MANUFACTURED:           01/2000
      PORT SELECT:          10BASE-T HALF
      ==================================
2     I/O CARD READY

3     NETWORK STATISTICS
      UNICAST PACKETS RCVD:              0
      TOTAL PACKETS RCVD:               12
      BAD PACKETS RCVD:                  0
      FRAMING ERRORS RCVD:               0
      PACKETS TRANSMITTED:               2
      UNSENDABLE PACKETS:                0
      XMIT COLLISIONS:                   0
      XMIT LATE COLLISIONS:              0
      IPX/SPX RETRANS:                   0
      ==================================
4     IPX/SPX STATUS:                   16
        INITIALIZING

      NODE:                  QUEUE SERVER
      NODE NAME:
        NPI1BE736
      NETWORK FRAME TYPE              RCVD
      00012345 EN 802.2                  7
      00000E11 EN II                     3
      F5AI363F EN 802.3                  2
      ==================================
5     DLC/LLC STATUS:                READY

      ==================================
6     TCP/IP STATUS.         INITIALIZING
        BOOTP/RARP IN PROGRESS

      HOST NAME:             NOT SPECIFIED
      CONFIG BY:            NOT CONFIGURED
      IP ADDRESS:                 0.0.0.0
      SUBNET MASK:           NOT SPECIFIED
      DEF. GATEWAY:               0.0.0.0
      SYSLOG SERVER:         NOT SPECIFIED
      IDLE TIMEOUT (SECONDS):           90
      BOOTP/DHCP SERVER:          0.0.0.0
      CONFIG FILE:

      ==================================
      SNMP SET CMTY NAME:            NONE
      ==================================
```

For information on configuration page messages, see chapter 8.

Resetting Configuration to Factory Defaults

Once you configure the HP Jetdirect 170X, the configuration settings are retained in memory unless you manually reset them to factory defaults.

To reset the 170X to factory defaults, follow these steps:

1. Unplug the power cord from the 170X.
2. While holding down the Test button on the 170X, plug the power module into the 170X and continue to hold down the Test button for five seconds. Any user-configured settings will be erased.

Troubleshooting Steps

Follow these overall steps to diagnose and resolve the problem:

- Verify the printer works properly.
- Verify the 170X hardware works properly.
- Verify that you can print to the printer when it's attached directly to a PC.

I. Verify the printer works properly

- Print a printer self-test page (see your printer documentation) to make sure the printer works properly.
- See your printer documentation to interpret the printer self-test page, and to diagnose and correct printer problems.

II. Verify the 170X hardware works properly

- Attach the printer to the 170X and attach the 170X to the LAN (see chapter 3 for more detailed instructions).
- Press the 170X Test button to print a configuration page.
- If a configuration page is printed, the 170X is connected properly. Review the page for status and error messages. If the configuration page is not printed, see section III below.

III. Verify that you can print to the printer when it's attached directly to a PC

- Attach the printer to a PC locally using a parallel cable that you know works properly.
- Print a file to the printer attached directly to your PC.
- If the file still does not print, you may have a printer driver or parallel cable problem.

  For Internet users, access HP's website for troubleshooting Jetdirect print servers: `www.hp.com/support/net_printing`. Select your product type and number and, when displayed, select `Support Documents`. Then select `Troubleshooting`.

  Also, see your printer documentation for a complete list of printer messages and corrective actions, and for instructions for printing a self-test page.

Novell NetWare (non-NDPS) Checklists

File Server Checklist

1. Is the file server up and running?

   If not, bring the file server up. See your network software documentation for more information.

2. Are you logged into the file server that you want the 170X to service?

   Verify that you have selected the correct file server; type `WHOAMI` at a DOS prompt.

Server-to-Printer Connection Checklist

1. Are any of the queues to be served by that printer disabled?

   Enable or eliminate queues and try printing again.

2. Is the data being sent to the printer?

   Verify the print queue is not on hold and that the correct print server is the only one servicing the queue. Use PCONSOLE (see the NetWare documentation) to verify the configuration.

3. Is there an "`INITIALIZING`" message on the 170X configuration page?

   Wait several minutes and print another configuration page. If the message persists, make sure any file servers, bridges, or routers on your network are operating correctly and make sure the network is correctly wired. If the message persists, there may be an unsupported frame type on your network.

Workstation Checklist

1. Is the workstation running the network software?

   Make sure the network operating system software is loaded. If you cannot load your network software, see your network software documentation.

2. Is your software application correctly configured to print to the network printer?

   Make sure your software application is printing to the correct port using the correct driver and that the port is configured correctly.

Workstation-to-Print Server Checklist

1. Is the workstation connected to the shared queue for the network printer?

   - Use PCONSOLE to verify that a printed job is queued to the intended queue.
   - Use PCONSOLE to verify that a print queue is not on hold.
   - Use PCONSOLE to verify the print queue is being serviced by a print server.

2. Is Novell's CAPTURE utility running?

   Use the CAPTURE or NPRINT command to send data to the printer.

3. Is another printer taking jobs from the queue before the new printer can service the jobs?

   Disassociate one of the 2 printers from the queue or make sure the 170X has a unique name.

Microsoft Windows 95, 98, 2000, NT 4.0 Checklist

- For Internet users, access HP's website for troubleshooting Jetdirect print servers: `www.hp.com/support/net_printing`. Select your product type and number and, when displayed, select `Support Documents`. Then select `Troubleshooting`.
- Check your network settings and verify that the proper protocols and services are configured.
- Check that your print path (or port) is properly configured.
- For NT and 2000 Servers, verify that the printer is shared.
- Verify that network and HP Jetdirect settings on the 170X configuration page are correct.

HP Jetdirect Configuration Page Messages

Overview

This chapter describes the messages, network statistics, and status that can be printed on a configuration page (also called a self-test page or configuration plot). If you have not printed a configuration page from your printer, see chapter 3.

These messages include configuration information and error messages for each network operating system. The configuration information for individual networks is listed in the following:

- Table 8.1 — Novell NetWare Configuration Messages
- Table 8.2 — General HP Jetdirect Messages (status and error messages listed in alphabetical order)

Note See chapter 7 for a description and illustration of the configuration page.

Table 8.1 Novell NetWare Configuration Messages (1 of 2)	
Message	**Description**
IPX/SPX RETRANS:	Number of retransmissions necessary because a remote node did not acknowledge receipt of a frame sent to it. Excessive retransmissions may degrade performance, cause 40 ERRORS, or indicate developing network hardware or congestion problems.
IPX/SPX STATUS:	Indicates the current IPX/SPX protocol status. 16 Not Configured indicates the print server is ready to be configured for Novell
DISABLED	DISABLED indicates that IPX/SPX was manually disabled.
READY	READY indicates the HP Jetdirect print server is awaiting data.
INITIALIZING	INITIALIZING indicates that the print server is registering the node address or name.
NOT IN USE	Code is in the middle of a download.
MODE:	The mode used by the print server.
QUEUE SERVER REMOTE PRINTER	QUEUE SERVER indicates that the print server receives data directly from the queue; REMOTE PRINTER, with the printer number following it, indicates that the print server emulates a Novell remote printer. If the printer is not configured, this field displays QUEUE SERVER.

Table 8.1 Novell NetWare Configuration Messages (2 of 2)	
Message	**Description**
NETWORK FRAME TYPE RCVD	The first column indicates the network number associated with the protocol frame type for communication between server and printer. Unless a specific frame type has been manually configured, the print server automatically determines the protocol frame type by listening to the NetWare data being transferred over the network. If UNKNOWN is listed, the HP Jetdirect print server is still trying to determine which network number to use. If the network number is DISABLED, a specific frame type has been manually configured. The Frame Type value can be EN_8023, EN_8022, EN_II, or EN_SNAP. The RCVD count indicates how many packets have been received for each frame type.
NODE NAME:	Queue Server Mode: The print server name. This name must match a valid print server on the appropriate NetWare file server. The default name is NPIxxxxxx, where xxxxxx represents the last six digits of the LAN hardware address. Remote Printer Mode: The name you gave to the network printer when you configured the network printer. The default name is NPIxxxxxx.
PORT 1 STATUS:	READY: Print server is awaiting data. INITIALIZING: Print server is registering the node address or name/type.
SERVER NAME:	The name of the NetWare file server or print server. If no name is displayed, the Jetdirect print server has not been configured. If the message "UNABLE TO FIND FILE SERVER" appears in the "IPX/SPX STATUS:" section of the configuration page (see Table 8.2), the SERVER NAME field identifies the Jetdirect discovery method [NSQ] (Nearest Service Query) or [GSQ] (General Service Query) and the name of the proxy file server used to locate the configured bindery servers.

Table 8.2 General HP Jetdirect Messages (1 of 15)	
Message	**Description**
ARP DUPLICATE IP ADDRESS	The ARP layer has detected another node on the network using the same IP address as the HP Jetdirect print server. Extended error information below this message shows the hardware address of the other node.
BABBLE ERROR	Run the power-on self-test: turn the printer off, then on again. If the error persists, call the Customer Care Center (see Chapter 1 for telephone numbers).
BAD BOOTP REPLY	An error was detected in the BOOTP reply that the HP Jetdirect print server received. The BOOTP reply either had insufficient data in the UDP datagram to contain the minimum BOOTP header of 236 bytes, had an operation field that was not BOOTPREPLY(0X02), had a header field that did not match the print servers hardware address, or had a UDP source port that was not the BOOTP server port (67/udp).
BAD BOOTP TAG SIZE	The tagsize in a vendor specific field in the BOOTP reply is either 0, or greater than the remaining number of unprocessed bytes in the vendor specified area.
BAD LENGTH RCVD:	Total number of frames missed because they were too long for the HP Jetdirect print server to receive.
BAD PACKETS RCVD:	Total number of frames (packets) received by the HP Jetdirect print server with errors.
BOOTP IN PROGRESS	The HP Jetdirect print server is currently in the process of obtaining its basic IP configuration information through BOOTP, and has not detected any errors.
CF ERR - ACCESS LIST EXCEEDED	The TFTP configuration file specified too many access list entries using the “allow:” keyword.
CF ERR - FILE INCOMPLETE	The TFTP configuration file contained an incomplete last line that did not end in a newline character.
CF ERR - INVALID PARAM	A line in the TFTP configuration file contained an invalid value for one of the parameters on that line.

Table 8.2 General HP Jetdirect Messages (2 of 15)	
Message	**Description**
CF ERR - LINE TOO LONG	A line being processed in the TFTP configuration file was longer than the HP Jetdirect print server could accept.
CF ERR - MISSING PARAM	A line in the TFTP configuration file was missing a required parameter.
CF ERR - TRAP LIST EXCEEDED	The TFTP configuration file specified too many trap destination list entries using the "trap-destination:" keyword.
CF ERR - UNKNOWN KEYWORD	A TFTP configuration file line contained an unknown keyword.
CONFIGURATION ERROR	The configuration information for the NetWare functions is not stored correctly on the HP Jetdirect print server. Rerun the installation software to reconfigure. If this error persists, there may be a problem with the HP Jetdirect print server.
CRC ERROR	Check the network topology and verify all cable segments. Check for damaged cables.
DHCP NACK	The server has not acknowledged the DHCP request. Rerun the configuration software to restart the process.
DISCONNECTED	The Novell NetWare protocol is disconnected. Check the server and the print server.
PORT SELECT DISCONNECTED	The port on the card that was automatically sensed as having the cable attached. No cable detected.
DISCONNECTING - SPX TIMEOUT	The SPX connection to the print server was lost after the connection had been made. This indicates a possible network problem, or a problem with the print server. Make sure all cables and routers are functioning correctly. Try restarting the print server.

Table 8.2 General HP Jetdirect Messages (3 of 15)	
Message	**Description**
DISCONNECTING FROM SERVER	The server has been shut down because of a configuration change or reset request. This message automatically clears after a few seconds, unless the printer is offline, is in an error state, or is servicing another I/O port or another network protocol.
ERR NEGOTIATING BUFFER SIZE	A failure was detected when selecting the buffer size to be used when reading print data from the file server. This may indicate a network problem. When the HP Jetdirect print server is configured for multiple file servers, the error is only displayed on the configuration page (also called a self-test page or configuration plot) if none of the file servers was successfully connected.
FAIL RESERVING PRINTER NUM	The SPX connection to the print server was lost when the HP Jetdirect print server attempted to reserve the printer number. This indicates a possible network problem, or a problem with the print server. Make sure all cables and routers are functioning correctly. Try restarting the print server.
FIRMWARE REVISION: X.XX.XX	The firmware revision number of the HP Jetdirect print server currently installed in the printer.
HP Jetdirect JXXXXX	Identifies the HP Jetdirect print server model number.
I/O CARD INITIALIZING (INIT)	The HP Jetdirect print server is initializing the network protocols. For more information, see the network operating system status line on the configuration page (also called a self-test page or configuration plot).
I/O CARD NOT READY	There is a problem with the print server or its configuration. Following the I/O CARD NOT READY message is a status message. See this table for a detailed explanation of all status messages.
I/O CARD READY	The HP Jetdirect print server is connected and awaiting data.

Table 8.2 General HP Jetdirect Messages (4 of 15)	
Message	**Description**
INITIALIZING TRYING TO CONNECT TO SERVER	The HP Jetdirect print server is trying to connect to the NetWare server(s). This is a normal message. Wait until the connection is established or another status message appears.
INVALID GATEWAY ADDRESS	The default gateway IP address specified for the HP Jetdirect print server (through BOOTP or NOVRAM) is an invalid IP address for specifying a single node.
INVALID IP ADDRESS	The IP address specified for the HP Jetdirect print server (through BOOTP or NOVRAM) is an invalid IP address for specifying a single node.
INVALID SERVER ADDRESS	The TFTP server IP address specified for the HP Jetdirect print server (through BOOTP) is an invalid IP address for specifying a single node.
INVALID SUBNET MASK	The IP subnet mask specified for the HP Jetdirect print server (through BOOTP or NOVRAM) is an invalid subnet mask.
INVALID SYSLOG ADDRESS	The syslog server IP address specified for the HP Jetdirect print server (through BOOTP) is an invalid IP address for specifying a single node.
INVALID TRAP DEST ADDRESS	One of the SNMP trap (Trap PDU) destination IP addresses specified for the HP Jetdirect print server (through TFTP) is an invalid IP address for specifying a single node.
LAN ERROR-AUTO REMOVAL	Run the power-on self-test: turn the printer off, then on again. If this message reappears on another configuration page, you may have a problem with one of the HP Jetdirect print servers on your network. Check all the print servers on the network for proper operation.

Table 8.2 General HP Jetdirect Messages (5 of 15)	
Message	**Description**
LAN ERROR-BABBLE	Check the network connections. If the connections are intact, run the power-on self-test: turn the printer off, then on again. If the error persists, call the Customer Care Center (see Chapter 1 for telephone numbers).
LAN ERROR-CONTROLLER CHIP	Check the network connections. If the connections are intact, run the power-on self-test: turn the printer off, then on again. If the error persists, call the Customer Care Center (see Chapter 1 for telephone numbers).
LAN ERROR-EXTERNAL LOOPBACK	The HP Jetdirect print server is incorrectly connected to your network or is defective. Make sure your HP Jetdirect print server is correctly attached to your network. In addition, check the cabling.
LAN ERROR-LOSS OF CARRIER	Check the network connections. If the connections are intact, run the power-on self-test: turn the printer off, then on again. If the error persists, call the Customer Care Center (see Chapter 1 for telephone numbers).
LAN ERROR-NO LINKBEAT	This message is displayed if Link Beat is not sensed. Check the network cable, and verify that the concentrator/hub is providing Link Beat.
LAN ERROR-NO SQE	Check the network connections. If the connections are intact, run the power-on self-test: turn the printer off, then on again. If the error persists, call the Customer Care Center (see Chapter 1 for telephone numbers).
LAN ERROR-RECEIVER OFF	There may be a problem with your network cabling or the HP Jetdirect print server. Check the cabling on your Ethernet network. If you cannot find a problem with your network cabling, run the power-on self-test: turn the printer off, then on again. If the error persists after the printer is turned on again, there is a problem with the HP Jetdirect print server.

Table 8.2 General HP Jetdirect Messages (6 of 15)	
Message	**Description**
LAN ERROR-REMOVE RECEIVE	Run the power-on self-test: turn the printer off, then on again. If this message reappears on the resulting configuration page, you may have a problem with one of the HP Jetdirect print servers on your network. Check all the HP Jetdirect print servers on the network for proper operation.
LAN ERROR-RETRY FAULTS	There is a problem with your network cabling or external network configuration. Make sure that your network cable is correctly terminated at both ends. Verify operation of the hub or switch port.
LAN ERROR-TRANSMITTER OFF	There may be a problem with your network cabling or the HP Jetdirect print server. Check the cabling on your Ethernet network. If you cannot find a problem with your network cabling, run the power-on self-test: turn the printer off, then on again. If the error persists, there is a problem with the HP Jetdirect print server.
LAN ERROR-UNDERFLOW	There may be a problem with your network cabling or the HP Jetdirect print server. Check the cabling on your network. If you cannot find a problem with your network cabling, run the power-on self-test: turn the printer off, then on again. If the error persists, there is a problem with the HP Jetdirect print server.
LAN ERROR-WIRE FAULT	There is a problem with the network cabling. Check the cabling between the printer and the network.
LAN HW ADDRESS: XXXXXXXXXXXX	The 12-digit hexadecimal network address of the HP Jetdirect print server installed in the printer.
LATE COLLISION ERROR	Check the network topology, verify all cable segments, and make sure no segment is too long.
LOSS OF CARRIER ERROR	Check the network connections. If the connections are intact, run the power-on self-test: turn the printer off, then on again. If the error persists, call the Customer Care Center (see Chapter 1 for telephone numbers).

Table 8.2 General HP Jetdirect Messages (7 of 15)	
Message	**Description**
LOST FRAMES:	Number of times the end of the frame could not be detected while transmitting.
MEMORY ERROR	Run the power-on self-test: turn the printer off, then on again. If the error persists, call the Customer Care Center (see Chapter 1 for telephone numbers).
MFG ID:	The manufacturing identification code.
NDS AUTHENTICATION ERROR	Unable to log onto the NetWare directory tree. Make sure that the print server object is defined in the directory at the correct context.
NDS CONNECTION STATE ERROR	The HP Jetdirect print server cannot change the NDS connection state. Check licenses on the spooling server.
NDS ERR: CANNOT READ Q HOST	Cannot locate the file server on the network. The server may not be running at this time or a communications problem may exist.
NDS ERR: CHANGE PSSWD FAILED	Cannot modify the print server password to the value expected by the HP Jetdirect print server.
NDS ERR: EXCEEDS MAX SERVERS	More queues were assigned than can be handled by the HP Jetdirect print server. Remove one or more print queues from the list to be serviced by Queue Server Mode.
NDS ERR: INVALID SRVR VERS	The current version of the NetWare file server is not supported.
NDS ERR: MAX PRINT OBJECTS	Too many printer objects are assigned to the print server object. Reduce the number of printer objects assigned to the print server using NWADMIN.
NDS ERR: MAX QUEUE OBJECTS	Too many print queue objects are assigned to the printer. Reduce the number of queues assigned.
NDS ERR: NO PRINTER OBJECTS	No printer objects are assigned to the print server object configured to this HP Jetdirect print server.

Table 8.2 General HP Jetdirect Messages (8 of 15)	
Message	**Description**
NDS ERR: NO QUEUE OBJECTS	No print queue objects are assigned to the printer objects located in the NDS directory.
NDS ERR: SRVR NAME UNRESOLVD	The file server on the network cannot be located. The server may not be running at this time or a communications problem may exist.
NDS ERR: UNABLE TO FIND TREE	The NDS tree cannot be located. The message may be caused because the file server is not running or because a network communications problem exists.
NDS ERR: UNABLE TO LOGIN	Unable to log onto the NetWare directory tree. Make sure that the print server object is defined in the directory at the correct context. Clear the print server password using NWADMIN.
NDS ERR: UNRESOLVD PRNTR OBJ	The printer object cannot be located in the NDS directory.
NDS ERR: UNRESOLVED QUEUE	The print queue object cannot be located in the specified NDS context.
NDS PRINT OBJ QUEUE LIST ERROR	The list of print queues assigned to the printer objects cannot be located.
NDS PRINT SERVER NAME ERROR	The print server object cannot be located in the specified NDS context.
NDS PRINTER OBJ NOTIFY ERR	The list of notification objects assigned to the printer object cannot be located.
NDS PRNT SRVR PUBLIC KEY ERR	Unable to read the Print server public key.
NDS PS PRINTER LIST ERROR	Cannot locate a list of printer objects that should be assigned to the print server object.

Table 8.2 General HP Jetdirect Messages (9 of 15)	
Message	**Description**
NDS SRVER PUBLIC KEY ERR	Unable to read the File server public key.
NO QUEUE ASSIGNED	The HP Jetdirect print server detected that the print server object has not been assigned any queues to service. Assign queues to the print server object using printer installation or NetWare utilities. When multiple file servers are configured, the error is only displayed on the configuration page (also called a self-test page or configuration plot) if none of the file servers were successfully connected.
NOT CONFIGURED	The HP Jetdirect print server has not been configured for NetWare. Use the printer installation software to configure the print server for NetWare networks.
NOVRAM ERROR	The HP Jetdirect print server cannot read the contents of its NOVRAM.
OUT OF BUFFERS	The HP Jetdirect print server was unable to allocate a buffer from its internal memory. This indicates all buffers are busy due possibly to heavy broadcast traffic or large amounts of network traffic directed to the print server.
OVERFLOW ERROR	Run the power-on self-test: turn the printer off, then on again.
PACKETS TRANSMITTED:	Total number of frames (packets) transmitted without error.

Table 8.2 General HP Jetdirect Messages (10 of 15)	
Message	**Description**
PARALLEL PORT X:	CENTRONICS indicates a standard parallel connection that transfers data in one direction only (to the printer). BITRONICS indicates a parallel connection that supports bidirectional communications. MLC, ECP2/MLC, ECP2/1284.3, 1284.3, ECP2/1284.4 or 1284.4 indicates a bidirectional parallel connection (IEEE-1284) that supports an enhanced capabilities port. DISCONNECTED indicates that no printer is attached to the port or the printer is not turned on.
PASSWORD ERROR	The HP Jetdirect print server detected that the password for the NetWare print server object is wrong. Use the PCONSOLE utility to erase the password for the print server object. When the HP Jetdirect print server logs on again, it sets a new password. When multiple file servers are configured, the error is only displayed on the test page if none of the file servers are connected.
PRINT SERVER NOT DEFINED	The file server does not have a print server object that corresponds to the specified NetWare node name. Use printer installation software or PCONSOLE to create the print server object. When the HP Jetdirect print server is configured for multiple file servers, the error is only displayed on the configuration page (also called a self-test page or configuration plot) if none of the file servers made the connection.
PRINTER NUMBER IN USE	The printer number assigned to the printer is already in use by another printer. Assign an unused printer number. This may also occur when a printer is power cycled, in which case the error goes away after the print server times out and detects the lost connection.

Table 8.2 General HP Jetdirect Messages (11 of 15)	
Message	**Description**
PRINTER NUMBER NOT DEFINED	The printer number you assigned to the remote printer has not been defined. Assign a valid printer number to the HP Jetdirect print server, or run PCONSOLE and define a printer number for the print server.
PSERVER CLOSED CONNECTION	The print server requested a termination of the connection with the HP Jetdirect print server. No error exists or is indicated. Make sure the print server is running, and restart it if necessary.
READY	The HP Jetdirect print server has successfully connected to the server and is awaiting data.
RECEIVE BUFFER ERROR	Run the power-on self-test: turn the printer off, then on again. If the error persists, call the Customer Care Center (see Chapter 1 for telephone numbers).
RETRY ERROR	Verify that the Ethernet network cable is correctly terminated on both ends. Make sure your HP Jetdirect print server is correctly attached to your network.
SECURITY EQUIVALENCE NOT SET	The security equivalences for your print server are not set up properly. Reconfigure your print server.
SQE ERROR	Run the power-on self-test: turn the printer off, then on again. If the error persists, call the Customer Care Center (see Chapter 1 for telephone numbers).
TFTP IN PROGRESS	The HP Jetdirect print server is currently in the process of obtaining its basic IP configuration information through TFTP and has not detected any errors.
TFTP LOCAL ERROR	The TFTP transfer of the configuration file from the host to the HP Jetdirect print server failed with the local print server encountering some form of inactivity timeout, or excessive retransmissions situation.
TFTP REMOTE ERROR	The TFTP transfer of the configuration file from the host to the HP Jetdirect print server failed with the remote host sending a TFTP ERROR packet to the print server.

Table 8.2 General HP Jetdirect Messages (12 of 15)	
Message	**Description**
TFTP RETRIES EXCEEDED	The overall retrying of the TFTP transfer of the configuration file from the host to the HP Jetdirect print server has exceeded a retry limit.
TOTAL PACKETS RECEIVED: TOTAL PACKETS RCVD:	Total number of frames (packets) received by the HP Jetdirect print server without error. This includes broadcast, multicast packets, and packets specifically addressed to the print server. This number does not include packets specifically addressed to other nodes.
TRANSMIT ERROR	Check the network topology and verify all cable segments.
TRYING TO CONNECT TO SERVER	The HP Jetdirect print server is trying to connect to the print server or NetWare file server after being configured. Wait for the print server to establish a connection with the print or file server.
TURN PRINTER OFF/ON	This message may appear after you upgrade to a new version of firmware. When this message appears, turn the printer off, then back on to enable any new functionality that was recently downloaded.
UNABLE TO ATTACH TO QUEUE	A failure was detected when the HP Jetdirect print server tried to attach to one of the queues assigned to the print server object. This may be because no servers are allowed to attach to this queue. There may also be a networking or security problem. Use PCONSOLE to make sure that servers are allowed to attach to the queue, to delete the print server object from the list of queue servers if you want the HP Jetdirect print server to service other queues, or to delete the queue and create a new one (the print server object must be added to the list of queue servers). When the HP Jetdirect print server is configured for multiple file servers, the error is only displayed on the configuration page (also called a self-test page or configuration plot) if none of the file servers made the connection.

Table 8.2 General HP Jetdirect Messages (13 of 15)	
Message	**Description**
UNABLE TO CONNECT TO SERVER	**Remote Printer mode:** The HP Jetdirect print server was unable to establish an SPX connection with the print server. Make sure that the print server is running and that all cables and routers are functioning correctly. **Queue Server mode:** The HP Jetdirect print server could not establish an NCP connection to the file server. Make sure that the correct file servers are connected. When multiple file servers are configured, the error is only displayed on the configuration page if none of the file servers were successfully connected.
UNABLE TO FIND SERVER	The HP Jetdirect print server was unable to find the NetWare print server (Remote Printer mode) or file server (Queue Server mode). (There was no response to service queries for advertising print servers or file servers that matched the configured print server or file server name.) Make sure that the print server or file server is running and that the print server or file server name configured on the HP Jetdirect print server matches the actual name used by the print server or file server. Also make sure that all cables and routers are functioning correctly.
UNABLE TO GET NDS SRVR ADDR	The NDS server address cannot be located or accessed.

Table 8.2 General HP Jetdirect Messages (14 of 15)	
Message	**Description**
UNABLE TO LOGIN	A failure was detected when the HP Jetdirect print server tried to log onto the file server. This could be caused by the print server object not existing on the file server, or because of a security check that prevents the print server from logging in. Make sure the file server name and print server object name are correct. Use PCONSOLE to erase the password for the print server object. Create a new print server object. When the HP Jetdirect print server is configured for multiple file servers, the error is only displayed on the configuration page (also called a self-test page or configuration plot) if none of the file servers made the connection.
UNABLE TO SENSE NET NUMBER	The HP Jetdirect print server has been trying for over 3 minutes to determine the NetWare protocol used on the network. Make sure that any file servers and routers are operating correctly. Make sure that the settings for NetWare frame type and source routing are correct.
UNABLE TO SET PASSWORD	A failure was detected when the HP Jetdirect print server tried to set the password for the print server object. (Whenever the HP Jetdirect print server is able to log in without a password, it sets the password automatically.) This indicates a networking or security problem. Create a new print server object. When multiple file servers are configured, the error is only displayed on the configuration page if none of the file servers were successfully connected.
UNDERFLOW ERROR	Check the cabling. If the error persists, run the power-on self-test: turn the printer off, then on again. If the error persists, call the Customer Care Center (see Chapter 1 for telephone numbers).

Table 8.2 General HP Jetdirect Messages (15 of 15)	
Message	**Description**
UNEXPECTED PSERVER DATA RCVD	The print server sent some data when the HP Jetdirect print server had not given its permission to do so. This indicates a possible print server problem, possibly a software problem.
UNICAST PACKETS RCVD:	Number of frames specifically addressed to this HP Jetdirect print server. This does not include broadcasts or multicasts.
UNKNOWN NCP RETURN CODE	The HP Jetdirect print server encountered an unexpected fatal error after it had successfully connected to the file server. A wide variety of failures could produce this error message, including a downed file server or a network router failure.
UNSENDABLE PACKETS:	Total number of frames (packets) not successfully transmitted because of errors.
WEBJA SERVER xxx.xxx.xxx.xxx	Identifies the IP address or domain name of the server that the HP Jetdirect print server uses for Web JetAdmin services.
XMIT COLLISIONS:	Number of frames not transmitted because of repeated collisions.
XMIT LATE COLLISIONS:	Total number of frames not transmitted because a late collision occurred. A large number may indicate a cabling problem on the network.

Technical Specifications and Regulatory Statements

Specifications

Supported Networks

HP J3258B Jetdirect 170X Print Server supports Ethernet or IEEE 802.3 Type 10Base-T networks using unshielded twisted-pair cable and RJ-45 connectors. It requires a 10Base-T network hub or concentrator that supports link beat (link test pulse) signals. See the table in Chapter 1 for supported networks.

Hardware

Physical Specifications

Parallel Port	DB25 female connector. Complies with IEEE 1284 bidirectional parallel port standard for connection to printers or plotters.

Product Number	Width	Height	Depth*	Weight
J3258B	180 mm (7.09 in.)	33 mm (1.3 in.)	115 mm (4.53 in.)	224 g (0.49 lbs.)
*Measurement includes any protrusions for connectors, legs, etc.				

Power Requirements

Parameter	170X	Power Module
Input Voltage	9-35 VDC	See Following Power Module Chart
Nominal Output Voltage	--	13 VDC
Input Current	140 ma @ 13 V	.2 A*
Max. Output Current	N/A	300 ma
Frequency Range	DC	50/60 Hz*
Power Consumption	1.2 W	1.2 W
* Voltage, current, and frequency specifications depend on your particular power module.		

Power Modules			
Note: If two parts are listed for one country/region, either part can be used regardless of output rating.			
Country/Region	**Part Num.**	**Input Rating**	**Output Rating**
Australia, New Zealand, Argentina	0950-3172	240VAC 50 Hz	13 VDC @300 ma
	0950-3358	240VAC 50 Hz	13 VDC @800 ma
China	0950-2806	220VAC 50 Hz	13 VDC @300 ma
	0950-3347	220VAC 50 Hz	13 VDC @800 ma
Continental Europe	0950-3170	230VAC 50 Hz	13 VDC @300 ma
	0950-3349	230VAC 50 Hz	13 VDC @800 ma
Japan	0950-3173	100VAC 50 Hz	13 VDC @300 ma
	0950-3352	100VAC 50 Hz	13 VDC @800 ma
South Korea	9100-5168	220-240VAC 50 Hz	13 VDC @625 ma
	0950-3351	220VAC 50 Hz	13 VDC @800 ma
South Africa, India	9100-5171	220-250VAC 50 Hz	13 VDC @625 ma
	0950-3354	220-250VAC 50 Hz	13 VDC @800 ma
United Kingdom, Singapore, Ireland, Hong Kong SAR	0950-3171	220-240VAC 50 Hz	13 VDC @300 ma
	0950-3350	220-240VAC 50 Hz	13 VDC @800 ma
USA, Canada, Latin America, Taiwan	0950-3169	110-127VAC 60 Hz	13 VDC @300 ma
	0950-3348	110-127VAC 60 Hz	13 VDC @800 ma

Environmental

Parameter	170X Operating	170X Non-Operating
Temperature	0 °C to 55 °C (32 °F to 131 °F)	-40 °C to 70 °C (-6 °F to 158 °F)
Relative Humidity	15% to 95% at 40 °C (104 °F) non-condensing	90% at 65 °C (149 °F)
Altitude	4.6 km	4.6 km

Acoustic Noise: Not Applicable

Electromagnetic Immunity: See the "Declaration of Conformity" (in this Appendix)

Electromagnetic Emissions

FCC part 15 Class A (U.S.A.), ICES-003 (Canada), VCCI Class 1 (in Japan), CISPR-22/EN55022 Class A, CNS 13438 (Taiwan), AS/NZS 3548 (Australia/New Zealand), GOST 29216 (Russia)

Safety

Product complies with:

IEC 950: (1991)+A1,A2,A3,A4/EN60950 (1992)+A1,A2,A3,A4

UL 1950

CSA 950

NOM-019-SCFI-1994 and NOM-001-SCFI-1993

Accessories

HP parallel cables (IEEE 1284 compatible)	2.0 meter parallel cable (36-pin Centronics male to DB25 male)	C2950A
	3.0 meter parallel cable (36-pin Centronics male to DB25 male)	C2951A

Regulatory Statements

FCC Statement (U.S.A)

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause interference to radio communications. Operation of this equipment in a residential area is likely to cause interference in which case the user will be required to correct the interference at their own expense.

Pursuant to Part 15.21 of the FCC Rules, any changes or modifications to this equipment not expressly approved by the Hewlett-Packard Company, may cause interference and void the FCC authorization to operate this equipment.

Attaching this product in an FCC Level B product results in an FCC Level A Composite System as defined in the FCC Rules and Regulations.

The Federal Communications Commission has prepared a booklet titled Interference Handbook (1986), which may be helpful to you. This booklet (stock number 004-000-004505-7) may be purchased from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.

European Community

This equipment complies with CISPR22/EN55022 Class A. This is a Class A product. In a domestic environment, this product may cause radio interference in which case the user may be required to take adequate measures.

Declaration of Conformity. The following Declaration of Conformity complies with ISO/IEC Guide 22 and EN45014. It identifies the product, manufacturer's name and address, and applicable specifications recognized in the European community.

DECLARATION OF CONFORMITY
according to ISO/IEC Guide 22 and EN45014

Manufacturer's Name: Hewlett-Packard Company

Manufacturer's Address: 8000 Foothills Blvd.
Roseville, CA 95747-5677
U.S.A.

declares that the product:

Product Name: HP JetDirect 170X

Model Number: J3258B

conforms to the following Product Specifications:

Safety: EN60950 (1992) +A1,A2,A3,A4,AII / IEC 950 (1991) +A1,A2,A3,A4
EN60825-1 (1994) / IEC 825-1 (1993), Class 1
GB 4943 (1995)

EMC: EN 55022 (1994) +A1,A2 / CISPR-22 (1993) +A1,A2 Class A
GB 9254 (1988)
EN 55024 (1998)
IEC 61000-4-2 (1995); EN 61000-4-2 (1995)
IEC 61000-4-3 (1995); EN 61000-4-3 (1996)
IEC 61000-4-4 (1995); EN 61000-4-4 (1995)

Supplementary Information:

The product herewith complies with the requirements of the Low Voltage Directive 73/23/EEC and the EMC Directive 89/336/EEC and carries the CE marking accordingly.

Tested with Hewlett-Packard Co. products only.

Roseville, May 26, 1999

Grant Marten, Product Regulations Manager

European Contact. Your local Hewlett-Packard Sales and Service Office or Hewlett-Packard GmbH, Department TRE, Herrenberger Strasse 130, D-71034 Böblingen (FAX:+49-7031-14-3143).

Australia

This equipment complies with Australian EMC requirements.

Canada

This equipment complies with Canadian EMC Class A requirements.

Japan VCCI Class 1

注意

この装置は、情報処理装置等電波障害自主規制協議会（ＶＣＣＩ）の基準に基づく第一種情報技術装置です。この装置を家庭環境で使用すると電波妨害を引き起こすことがあります。この場合には使用者が適切な対策を講ずるよう要求されることがあります。

Korea RRL

사용자 안내문 : A 급기기

이기기는 업무용으로 전자파 적합등록을 받은 기기이오니, 판매자 또는 사용자는 이점을 주의하시기 바라며, 만약 잘못 구입하셨을 때에는 구입한 곳에서 비업무용으로 교환하시기 바랍니다.

Taiwan Class A

警告使用者：這是甲類的資訊產品，在居住的環境中使用時，可能會造成射頻干擾，在這種情況下，使用者會被要求採取某些適當的對策。

HP网络产品使用安全手册

使用须知

欢迎使用惠普网络产品，为了您及仪器的安全，请您务必注意如下事项：

1. 仪器要和地线相接，要使用有正确接地插头的电源线，使用中国国家规定的220V电源。
2. 避免高温和尘土多的地方，否则易引起仪器内部部件的损坏。
3. 避免接近高温，避免接近直接热源，如直射太阳光、暖气等其它发热体。
4. 不要有异物或液体落入机内，以免部件短路。
5. 不要将磁体放置于仪器附近。

警告

为防止火灾或触电事故，请不要将该机放置于淋雨或潮湿处。

安装

安装辅助管理模块，请参看安装指南。

保修及技术支持

如果您按照以上步骤操作时遇到了困难，或想了解其它产品性能，请按以下方式与我们联络。

如是硬件故障：

1. 与售出单位或当地维修机构联系。
2. 中国惠普有限公司维修中心地址：
   北京市海淀区知春路49号希格玛大厦
   联系电话：010-62623888 转 6101
   邮政编码：100080

如是软件问题：

1. 惠普用户响应中心热线电话：010-65645959
2. 传真自动回复系统：010-65645735

Warranty Service

HEWLETT-PACKARD LIMITED WARRANTY STATEMENT

HP PRODUCT	DURATION OF LIMITED WARRANTY
HP Jetdirect 170X Print Server (J3258B)	1 year

1. HP warrants to you, the end-user customer, that HP hardware, accessories and supplies will be free from defects in materials and workmanship after the date of purchase, for the period specified above. If HP receives notice of such defects during the warranty period, HP will, at its option, either repair or replace products that prove to be defective. Replacement products may be either new or equivalent in performance to new.

2. HP warrants to you that HP software will not fail to execute its programming instructions after the date of purchase, for a period of NINETY (90) DAYS, due to defects in material and workmanship when properly installed and used. If HP receives notice of such defects during the NINETY (90) day period, HP will replace software that does not execute its programming instructions due to such defects.

3. HP does not warrant that the operation of HP products will be uninterrupted or error free. If HP is unable, within a reasonable time, to repair or replace any product to a condition as warranted, you will be entitled to a refund of the purchase price upon prompt return of the product.

4. HP products may contain remanufactured parts equivalent to new in performance or may have been subject to incidental use.

5. Warranty does not apply to defects resulting from (a) improper or inadequate maintenance or calibration, (b) software, interfacing, parts or supplies not supplied by HP, (c) unauthorized modification or misuse, (d) operation outside of the published environmental specifications for the product, or (e) improper site preparation or maintenance.

6. TO THE EXTENT ALLOWED BY LOCAL LAW, THE ABOVE WARRANTIES ARE EXCLUSIVE AND NO OTHER WARRANTY OR CONDITION, WHETHER WRITTEN OR ORAL, IS EXPRESSED OR IMPLIED AND HP SPECIFICALLY DISCLAIMS ANY IMPLIED WARRANTIES OR CONDITIONS OF MERCHANTABILITY, SATISFACTORY QUALITY, AND FITNESS FOR A PARTICULAR PURPOSE. Some countries, states or provinces do not allow limitations on the duration of an implied warranty, so the above limitation or exclusion might not apply to you. This warranty gives you specific legal rights and you might also have other rights that vary from country to country, state to state, or province to province.

7. HP will be liable for damage to tangible property per incident up to the greater of $300,000 or the actual amount paid for the product that is the subject of the claim, and for damages for bodily injury or death, to the extent that all such damages are determined by a court of competent jurisdiction to have been directly caused by a defective HP product.

8. TO THE EXTENT ALLOWED BY LOCAL LAW, THE REMEDIES IN THIS WARRANTY STATEMENT ARE YOUR SOLE AND EXCLUSIVE REMEDIES. EXCEPT AS INDICATED ABOVE, IN NO EVENT WILL HP OR ITS SUPPLIERS BE LIABLE FOR LOSS OF DATA OR FOR DIRECT, SPECIAL, INCIDENTAL, CONSEQUENTIAL (INCLUDING LOST PROFIT OR DATA), OR OTHER DAMAGE, WHETHER BASED IN CONTRACT, TORT, OR OTHERWISE. Some countries, states or provinces do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you.

THE WARRANTY TERMS CONTAINED IN THIS STATEMENT, EXCEPT TO THE EXTENT LAWFULLY PERMITTED, DO NOT EXCLUDE, RESTRICT OR MODIFY AND ARE IN ADDITION TO THE MANDATORY STATUTORY RIGHTS APPLICABLE TO THE SALE OF THIS PRODUCT TO YOU.

Your Authorized Dealer

If you encounter difficulty, begin by contacting the person who sold you the HP Jetdirect print server to you. Your HP Authorized Dealer will be familiar with your requirements and can provide assistance.

During the warranty period, HP will replace the unit at no charge provided the defective unit is returned. You may return the unit to your HP Authorized Dealer or your local HP Sales and Service Office representative. *Be sure to include a copy of your purchase receipt.*

Warranty Service

For warranty service on HP Jetdirect products, call the HP Customer Care Center. When calling, please have the following information ready:

- HP Jetdirect product you are calling about.
- Model number of the product.
- Serial number of the product.
- Complete description of the problem.
- Proof of purchase of your product.
- Your shipping address.

The HP Customer Care representative will help you with troubleshooting, and advise you on warranty service.

Service Billing (Out of Warranty)

When ordering a replacement unit for out-of-warranty service, you may be charged a repair cost. See your HP Authorized Dealer or your local HP Sales and Service Office representative. Or, you can call HP at (800) 227-8164 (USA only).

Service Outside the USA

Customers outside the USA should contact their HP Authorized Dealer or HP Sales and Service Office to obtain information on prices, exchange unit availability and instructions.

Hewlett-Packard Year 2000 Warranty

Subject to all of the terms and limitations of the HP Limited Warranty Statement provided with this HP Product, HP warrants that this HP Product will be able to accurately process date data (including, but not limited to, calculating, comparing, and sequencing) from, into, and between the twentieth and twenty-first centuries, and the years 1999 and 2000, including leap year calculations, when used in accordance with the Product documentation provided by HP (including any instructions for installing patches or upgrades), provided that all other products (e.g. hardware, software, firmware) used in combination with such HP Product(s) properly exchange date data with it. The duration of the Year 2000 warranty extends through January 31, 2001.

HP Jetdirect Year 2000 Compliance

Hewlett-Packard, the leader in printing solutions, wants to ensure our customers are ready for success in the year 2000. For the latest information regarding year 2000, click on the Year 2000 link at the following web site: http://www.hp.com/go/support

LOCAL WARRANTY STATEMENTS

Australia and New Zealand

For consumer transactions in Australia and New Zealand: The warranty terms contained herein except to the extent lawfully permitted, do not exclude, restrict, or modify and are in addition to the mandatory statutory rights applicable to the sale of this product to you.

Argentina:

Certificado de Garantia

Hewlett-Packard Argentina, S.A.
Montaneses 2150
1428 Buenos Aires
Argentina
Tel. 787-7100

Producto:	HP Jetdirect 170X Print Server
Modelo:	J3258B
No. de serie:	
Fecha de entrega:	
Vigencia de la garantia:	Un (1) Año
Extension de la garantia:	

A. Cobertura de la garantía:

1. Hewlett-Packard Argentina, S.A. (HPA) garantiza al cliente (usuario final) que el producto al que se refiere esta garantía estará libre de defectos de fabricación y de mano de obra por el término antes indicado contando desde la fecha de compra del producto por parte del usuario final original a un distribuidor o comercializador debidamente autorizado por HPA.

2. La presente garantía cubre únicamente aquellos defectos que surgiesen como resultado del uso normal del producto y no por aquellos que resultasen de:

a. Mantenimiento inapropiado o inadecuado o mantenimiento, alteración o reparación realizados por personal no autorizado por HPA;

b. Uso de software, accesorios, soportes, suministros, consumibles o interfaz no suministrados por HPA;

c. Modificaciones no autorizadas o uso indebido;

d. Operación fuera de las especificaciones ambientales para el producto, incluyendo abuso del ciclo de trabajo o uso de cargas de conmutadores sin protección contra sobretensiones;

e. Uso de medios de impresión o tarjetas de memoria no soportados;

f. Lugar de uso o mantenimiento inapropiados;

g. Daños durante el traslado; o h. Cualquier violación de las condiciones de uso, instalación y mantenimiento necesarias especificadas en el Manual de Operaciones.

3. Si el cliente (usuario final), durante el periodo de garantía, pusiera en conocimiento de HPA la existencia de los defectos definidos anteriormente, HPA podrá, según prefiera, reparar o reemplazar el producto si está averiado. Cualquier producto de reemplazo será nuevo o como nuevo. En caso que al momento del reemplazo no hubiese disponible un producto idéntico al reemplazado (ya sea por discontinuación de su producción, falta de stock o por cualquier otra causa), HPA se reserva el derecho de suministrar un producto de prestaciones o funcionalidad por lo menos iguales a las del producto reemplazado. Si luego de un plazo razonable, no fuese posible para HPA reparar o reemplazar el producto, el cliente tendrá derecho, como única compensación, al reintegro del precio de compra, contra la devolución del producto a HPA.

B. Limitación de la garantía:

1. NI HPA, NI NINGUNA ENTIDAD O PERSONA DIRECTA O INDIRECTAMENTE VINCULADA O RELACIONADA CON HPA: A) OFRECEN NINGUNA OTRA GARANTIA DE NINGUNA INDOLE, EXPRESA O IMPLICITA, ORAL O ESCRITA, RESPECTO AL PRODUCTO AL QUE SE REFIERE ESTA GARANTIA; O B) FORMULAN NINGUNA GARANTIA IMPLICITA DE COMERCIALIZACIÓN O ADECUACIÓN DEL PRODUCTO PARA UN PROPOSITO DETERMINADO.

HPA NO OFRECE NINGUNA GARANTÍA DE QUE LA OPERACIÓN DE SUS PRODUCTOS SERÁ ININTERRUMPIDA O LIBRE DE ERRORES.

C. Exoneración de responsabilidad:

EXCEPTUANDO LAS OBLIGACIONES EXPUESTAS EN ESTE CERTIFICADO DE GARANTIA, BAJO NINGUNA CIRCUNSTANCIA HPA SERÁ RESPONSABLE DE CUALQUIER DAÑO DIRECTO O INDIRECTO (INCLUYENDO SIN LIMITACIÓN, PERDIDA DE DATOS O LUCRO CESANTE) O POR CUALQUIER DAÑO O PERJUICIO QUE SEA CONSECUENCIA DIRECTA, INDIRECTA O REMOTA DEL USO O MAL FUNCIONAMIENTO DEL PRODUCTO, CUALQUIERA QUE SEA EL FUNDAMENTO DEL RECLAMO (CONTRACTUAL, EXTRACONTRACTUAL O LEGAL).

LOS REMEDIOS DESCRITOS EN ESTA GARANTIA SON LOS UNICOS Y EXCLUSIVOS.

D. Condiciones particulares:

E. Reparaciones:

Las reparaciones se llevarán a cabo en los centros autorizados de servicio en Argentina, contra la presentación del producto, este Certificado de Garantía y la factura original de compra del producto, en el caso de impresoras presentar la HP Card.

Mexico:

Póliza de Garantía

Hewlett-Packard de México, S.A. de C.V. con domicilio en:
Prolongación Reforma No. 470
Col. Lomas de Sta. Fe, 01210
Delegación Alvaro Obregón
Tel. 326 46 00

Garantiza este producto por el término de doce meses en todas sus partes y mano de obra contra cualquier defecto de fabricación y funcionamiento a partir de la fecha de entrega al consumidor final. En el caso de productos que requieran de enseñanza o adiestramiento en su manejo o en su instalación, a partir de la fecha en que hubiese quedado operando normalmente el producto después de su instalación en el domicilio que señale el consumidor.

CONDICIONES:

1. Centros de Servicio, Refacciones y Partes:

Para hacer efectiva esta garantía, no podrán exigirse mayores requisitos que la presentación de esta póliza junto con el producto en el lugar donde fue adquirido o en el centro de servicio ubicado en el domicilio de la parte superior de esta hoja, mismo en el que se pueden adquirir refacciones y partes.

2. Cobertura:

La Empresa se compromete a reparar o cambiar el producto, así como las piezas y componentes defectuosos del mismo, sin ningún cargo para el consumidor. Los gastos de transportación que se deriven de su cumplimiento serán cubiertos por Hewlett-Packard de México, S.A. de C.V.

3. Tiempo de Reparación:

El tiempo de reparación en ningún caso será mayor a treinta días contados a partir de la recepción del producto en cualquiera de los sitios en donde pueda hacerse efectiva la garantía.

4. Limitaciones:

Esta garantía no es válida en los siguientes casos:

a. Cuando el producto ha sido utilizado en condiciones distintas a las normales.

b. Cuando el producto no ha sido operado de acuerdo con el instructivo de uso en idioma Español proporcionado.

c. Cuando el producto ha sido alterado o reparado por personas no autorizadas por Hewlett-Packard de México, S.A. de C.V.

<table>
<tr><td colspan="2">Producto:
HP Jetdirect 170X Print Server</td><td>Marca
Hewlett-Packard</td><td>Modelo
J3258B</td></tr>
<tr><td colspan="2">No. de Serie</td><td colspan="2">Nombre del Distribuidor</td></tr>
<tr><td colspan="4">Dorección: (Calle, Número, Colonia o Poblado, Delegación o Municipio)</td></tr>
<tr><td>C.P.</td><td>Ciudad</td><td>Estado</td><td>Teléfono</td></tr>
<tr><td colspan="4">Fecha de entrega o instalación</td></tr>
</table>

Notas:

El consumidor podrá solicitar que se haga efectiva la garantía ante la propia casa comercial donde adquirió el producto siempre y cuando el fabricante o importador no cuente con talleres de servicio.

En caso de que la presente garantía se extraviara, el consumidor puede recurrir a su proveedor para que se le expida otra póliza de garantía, previa presentación de la nota de compra o factura respectiva.

Index

A

ARP DUPLICATE IP ADDRESS 8-4

B

BABBLE ERROR 8-4
BAD BOOTP REPLY 8-4
BAD BOOTP TAG SIZE 8-4
BAD LENGTH RCVD 8-4
BAD PACKETS RCVD 8-4
BOOTP IN PROGRESS 8-4
Browsers, supported 5-2

C

CF ERR
  ACCESS LIST EXCEEDED 8-4
  FILE INCOMPLETE 8-4
  INVALID PARAM 8-4
  LINE TOO LONG 8-5
  MISSING PARAM 8-5
  TRAP LIST EXCEEDED 8-5
  UNKNOWN KEYWORD 8-5
clients, supported 2-9
Client-server 1-3
commands, FTP printing 6-4
configuration
  modifying a device 2-7
CONFIGURATION ERROR 8-5
Configuration messages
  Novell NetWare 8-2
Configuration page
  generating 3-4
  how to print 7-5
  messages 8-1
CRC ERROR 8-5

D

Defaults
  restoring 7-4
DHCP NACK 8-5
DISCONNECTED 8-5
DISCONNECTING
  FROM SERVER 8-6
  SPX TIMEOUT 8-5
Distribution center 1-6

E

Electronic support services 1-6
Embedded Web Server 5-1
  Special Features 5-3
  Supported HP Web JetAdmin Version 5-2
  Supported Web Browsers 5-2
  Viewing 5-2
ERR NEGOTIATING BUFFER SIZE 8-6
Error messages 8-1

F

F1 TRYING TO CONNECT TO SERVER 8-15
F2 TFTP IN PROGRESS 8-14
F3 BOOTP IN PROGRESS 8-4
FAIL RESERVING PRINTER NUM 8-6
FIRMWARE REVISION 8-6
Forum for user support 1-6

FTP printing
commands 6-4
example 6-5
exiting 6-4
how to 6-2
introduction 6-1
FTP Site 1-6

G

gateway 2-8

H

hardware installation 2-1, 3-1, 3-2, 3-3, 3-4
HP Customer Care Center
electronic support services 1-6
HP IP/IPX printer gateway for NDPS 2-8
HP JETDIRECT ETHERNET 8-6
HP Web JetAdmin 2-6, 2-7

I

I/O CARD INIT 8-6
I/O CARD INITIALIZING 8-6
I/O CARD NOT READY 8-6
I/O CARD READY 8-6
INITIALIZING
TRYING TO CONNECT TO SERVER 8-7
installing
an overview 1-5, 2-1, 2-2, 2-3, 2-4, 2-5, 3-1
driver, see software installation
HP Web JetAdmin 2-6, 2-7
printer on systems 2-1, 4-1–??
see also hardware installation
see also software installation
INVALID GATEWAY ADDRESS 8-7
INVALID IP ADDRESS 8-7
INVALID SERVER ADDRESS 8-7
INVALID SUBNET MASK 8-7
INVALID SYSLOG ADDRESS 8-7
INVALID TRAP DEST ADDRESS 8-7
IP/IPX printer gateway, see HP IP/IPX printer gateway for NDPS

J

JetAdmin, see HP Web JetAdmin
JETDIRECT ETHERNET 8-6

L

LAN ERROR
AUTO REMOVAL 8-7
BABBLE 8-8
CONTROLLER CHIP 8-8
EXTERNAL LOOPBACK 8-8
LOSS OF CARRIER 8-8
NO LINKBEAT 8-8
NO SQE 8-8
RECEIVER OFF 8-8
REMOVE RECEIVE 8-9
RETRY FAULTS 8-9
TRANSMITTER OFF 8-9
UNDERFLOW 8-9
WIRE FAULT 8-9
LAN HW ADDRESS 8-9
LATE COLLISION ERROR 8-9
LOSS OF CARRIER ERROR 8-9
LOST FRAMES 8-10

M

MEMORY ERROR 8-10
Messages 8-1

MFG ID 8-10

N

NDPS, see HP IP/IPX printer gateway for NDPS
NDS AUTHENTICATION ERROR 8-10
NDS CONNECTION STATE ERROR 8-10
NDS ERR
  CANNOT READ Q HOST 8-10
  CHANGE PSSWD FAILED 8-10
  EXCEEDS MAX SERVERS 8-10
  INVALID SRVR VERS 8-10
  MAX PRINT OBJECTS 8-10
  MAX QUEUE OBJECTS 8-10
  NO PRINTER OBJECTS 8-10
  NO QUEUE OBJECTS 8-11
  SRVR NAME UNRESOLVD 8-11
  UNABLE TO FIND TREE 8-11
  UNABLE TO LOGIN 8-11
  UNRESOLVD PRNTR OBJ 8-11
  UNRESOLVED QUEUE 8-11
NDS error messages 8-10, 8-11
NDS PRINT OBJ
  QUEUE LIST ERROR 8-11
NDS PRINT SERVER
  NAME ERROR 8-11
NDS PRINTER OBJ
  NOTIFY ERR 8-11
NDS PS PRINTER LIST ERROR 8-11
NDS SERVR
  PUBLIC KEY ERR 8-11, 8-12
NetWare networks
  configuration messages 8-2
Network Operating Systems, supported 1-1
NO QUEUE ASSIGNED 8-12
NOSs, supported 1-1
NOT CONFIGURED 8-12
Novell NetWare
  configuration messages 8-2
Novell NetWare checklist
  file server checklist 7-6
  print/file server to printer connection 7-6
  workstation checklist 7-7
NOVRAM ERROR 8-12

O

Operating Systems, supported 1-1
OUT OF BUFFERS 8-12
OVERFLOW ERROR 8-12

P

PACKETS TRANSMITTED 8-12
PASSWORD ERROR 8-13
Peer-to-peer 1-3
PORT SELECT
  BNC or 10BASE-T 8-5
Power module 3-3
  specifications A-2
PRINT SERVER NOT DEFINED 8-13
printer gateway, see HP IP/IPX printer gateway for NDPS
PRINTER NUMBER IN USE 8-13
PRINTER NUMBER NOT DEFINED 8-14
PSERVER CLOSED CONNECTION 8-14

R

READY 8-14
RECEIVE BUFFER ERROR 8-14
RETRY ERROR 8-14

S

Self-test page
  messages 8-1
software installation 2-1, 2-3, 2-4, 2-5, 2-6, 2-7, 2-8, 2-9, 4-1–4-7
  HP Web JetAdmin 2-6
Specifications
  HP 170X A-1
SQE ERROR 8-14
Support services 1-6
Supported operating systems 1-1
Supported web browsers 5-2

T

TFTP IN PROGRESS 8-14
TFTP LOCAL ERROR 8-14
TFTP REMOTE ERROR 8-14
TFTP RETRIES EXCEEDED 8-15
TOTAL PACKETS RCVD 8-15
TOTAL PACKETS RECEIVED 8-15
TRANSMIT ERROR 8-15
Troubleshooting 7-1
TRYING TO CONNECT
  TO SERVER 8-15
TURN PRINTER OFF/ON 8-15

U

UNABLE TO ATTACH
  TO QUEUE 8-15
UNABLE TO CONNECT
  TO SERVER 8-16
UNABLE TO FIND SERVER 8-16
UNABLE TO GET NDS SRVR ADDR 8-16
UNABLE TO LOGIN 8-17
UNABLE TO SENSE
  NET NUMBER 8-17
UNABLE TO SET PASSWORD 8-17
UNDERFLOW ERROR 8-17
UNEXPECTED PSERVER DATA RCVD 8-18
UNICAST PACKETS RCVD 8-18
UNKNOWN NCP RETURN CODE 8-18
UNSENDABLE PACKETS 8-18
User forums 1-6

W

Web browsers, supported 5-2
Web JetAdmin, see HP Web JetAdmin

X

XMIT COLLISIONS 8-18
XMIT LATE COLLISIONS 8-18

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